

AMENDMENTS TO THE DRAWINGS:

Please replace Figure 7 with the attached replacement sheet.

REMARKS

Claims 1-15 and 22-35 are pending in the present application. Claims 16-21 were canceled; claims 1-12, 22-27, 30-32, 34 and 35 were amended. Reconsideration of the claims is respectfully requested.

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

Also, Applicants have submitted a replacement sheet for Figure 7 as required by the Examiner.

Applicants wish to thank the Examiner for taking the time to participate in a telephone conference on November 17, 2004. In the teleconference, Applicants' representative and the Examiner discussed the Examiner's objections to the specification and the Examiner's rejection of claims 1-21 under 35 U.S. C. §112, first paragraph. This response has been prepared pursuant to comments and suggestions made by the Examiner during the interview.

I. Objection to Specification 37 CFR 1.71

The Examiner has objected to the specification under 37 CFR 1.71 because the subject matter of claims 1 and 16 is not fully disclosed. Specifically, the Examiner has stated that the limitation of claims 1 and 16 regarding that the module is mobile or self-locomotive has not been disclosed in sufficient detail to allow a person skilled in the art to carry out the invention.

In the November 17, 2004 teleconference, the Examiner explained that he did not believe that the phrase "wherein the module is mobile," recited in claim 1 and the phrase "means for self-locomotion," recited in claim 16, was adequately disclosed within the specification. The Examiner stated that removal of the phrase "wherein the module is mobile" and the cancellation of claim 16 would cure his objection. In response, and to expedite prosecution, Applicants have removed the phrase "wherein the module is mobile" from claim 1 and have cancelled claim 16. Applicants have also canceled claims 17-21, which depend from claim 16.

Therefore, the objection to the specification under 37 CFR 1.71 has been overcome.

II. Objection to Drawings, 37 CFR 1.83(a)

The Examiner has objected to the drawings under 37 CFR 1.83(a) stating that the drawings must show every feature of the invention specified in the claims. Specifically, the Examiner has stated that the subject matter claims 16-21 and 24-26 must be shown.

In the November 17, 2004 teleconference, the Examiner explained that, regarding claims 24-26, he did not believe that the drawings showed that bridge tracks were able to be connected and disconnected from the tracks on the storage modules. In response, and to expedite prosecution, Applicants have cancelled claims 16-21. Applicants have also amended Figure 7 to show the missing features of claims 24-26.

Therefore, the objection to the drawings under 37 CFR 1.83(a) has been overcome.

III. 35 U.S.C. § 112, First Paragraph

The Examiner has rejected claims 1-21 under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention. This rejection is respectfully traversed.

In the November 17, 2004 teleconference, the Examiner explained that his rejection of claims 1-21 under 35 U.S.C. § 112, first paragraph was based on the phrase “wherein the module is mobile,” recited in claim 1 and upon the phrase “means for self-locomotion,” recited in claim 16. The Examiner stated that removal of the phrase “wherein the module is mobile” and the cancellation of claim 16 would cure his rejection. In response, and to expedite prosecution, Applicants have removed the phrase “wherein the module is mobile” from claim 1 and have cancelled claim 16. Applicants have also canceled claims 17-21, which depend from claim 16.

Therefore, the rejection of claims 1-21 under 35 U.S.C. § 112, first paragraph has been overcome.

IV. 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 1-35 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

The Examiner has stated that:

It is not clear from claim 1 how the parallel rows of configurable instances of tracks can be configured if they are parallel and attached to the housing. It is not clear from claims 8 and 25 how “the bridge tracks can be connected and disconnected from the module independently of each other.” If they are connected to each other they cannot be disconnected independent of each other. Regarding claim 16, it is not clear what is the meaning of means for self-locomotion for the removable-unit storage module. Regarding claim 22, it is not clear how the bridge tracks allow robotic hands to move between tracks. It is also not clear if the bridge tracks are the same as the tracks or are different.

(Office Action, August 11, 2004, page 3).

Regarding claim 1, the Examiner stated that “[i]t is not clear from claim 1 how the parallel rows of configurable instances of tracks can be configured if they are parallel and attached to the housing. Claim 1 recites “substantially parallel rows of configurable instances of tracks attached to the housing”. The parallel rows are configurable because they can be arranged in various geometric shapes, such as rows and spirals. The configuration can be changed by moving the tracks; or, more specifically, by changing the point at which the ends of the tracks are attached to the housing. In all cases, the tracks remain parallel to each other, forming a repeating pattern.

Claim 8 recites the feature of “wherein the bridge tracks can be connected and disconnected from the module independently of each other.” Claim 25 recites similar subject matter. The Examiner has stated “[i]f they are connected to each other, they cannot be disconnected independent of each other.” (Office Action, August 11, 2004, page 3). The bridge tracks are connected to the module, not to each other. Therefore, “the bridge tracks can be connected and disconnected from the module independently of each other.”

Regarding claim 22, the Examiner has stated “it is not clear how the bridge tracks allow robotic hands to move between tracks.” (Office Action, August 11, 2004, page 3). However, to one skilled in the art it would be obvious, that by connecting a bridge track between two other module tracks, how the robotic hands could then travel from one module track over the bridge track to the other module track.

Additionally, the Examiner has stated that in claim 22 “[i]t is also not clear if the bridge tracks are the same as the tracks or are different.” (Office Action, August 11, 2004, page 3). In response, claim 22 has been amended to recite “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.”

Regarding claim 5, the Examiner stated:

Claim 5 recites the limitation “the parallel tracks” in line 2. There is insufficient antecedent basis for this limitation in the claim.

(Office Action, August 11, 2004, page 4).

Applicants have amended claim 5 to recite “the module tracks.” Thus, proper antecedent basis now exists for claim 5.

Therefore, for the reasons stated above, the rejection of claims 1-35 under 35 U.S.C. § 112, second paragraph has been overcome.

V. 35 U.S.C. § 102, Anticipation, Claims 1-4, 6, 12-16, and 22

The Examiner has rejected claims 1-4, 6, 12-16, and 22 under 35 U.S.C. § 102 as being anticipated by Williams (U.S. Pat. 6,488,462), hereinafter “*Williams*”. This rejection is respectfully traversed.

Specifically, the Office action states:

Regarding claim 1, as far as it is understood, Williams discloses a removable-unit storage module 11 (figures 1-10), comprising:

a housing 12;
storage cells 14 arranged within the housing;
robotic hands 50 to retrieve objects from the storage cells; and

substantially parallel rows 54, 58 of configurable instances of tracks attached to the housing on which the robotic hands travel; wherein the module is mobile (see casters 44 in figure 2).

(Office Action, August 11, 2004, pages 4-5).

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Williams* reference cited by the Examiner does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Amended independent claim 1 recites:

1. A removable-unit storage module, comprising:
 - a housing;
 - storage cells arranged within the housing, wherein the storage cells contain a plurality of objects;
 - robotic hands to retrieve the plurality of objects from the storage cells; and
 - module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.

Williams does not teach each and every feature of the presently claimed invention in claim 1. *Williams* does not teach the feature of “storage cells arranged within the housing, wherein the storage cells contain a plurality of objects.” The Examiner has stated that element 14 of Figure 2 teaches this feature. Instead, *Williams* teaches that element 14 of Figure 2 is shaped specifically to hold a single tape cartridge:

Typically, each storage bin 14 defines a rectangular shaped slot that is sized and shaped to retain a single cartridge 20.
(*Williams*, col. 4, lines 16-18)

Therefore, the storage system taught by *Williams* cannot contain “a plurality of objects,” as recited in amended claim 1 of the present invention. Therefore, *Williams* does not teach the feature of “storage cells arranged within the housing, wherein the storage cells contain

a plurality of objects.” Thus, *Williams* does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Additionally, claim 1 recites the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” *Williams* does not teach this feature. The Examiner points to elements 54 and 58 of Figure 3 as teaching this feature. *Williams* fully describes the elements of Figure 3 in a paragraph beginning on column 4, line 54 and continuing through column 5 line 3:

Preferably, the handling mechanism mover 48 moves the gripper assembly 50 along a X axis, a Y axis, and around the Y axis so that the gripper assembly 50 can move and position the cartridges 20 within the library cavity 28. Referring to FIG. 3, the handling mechanism mover 48 can include (i) a pair of spaced apart vertical guides 54 (only one is illustrated), (ii) a vertical actuator 56 for moving the gripper assembly 50 vertically along the vertical guides 54, (iii) a pair of spaced apart horizontal guides 58 (only one is illustrated), (iv) a horizontal actuator 60 which moves the gripper assembly 50 horizontally along the horizontal guides 58, and (v) a rotary actuator 62 which rotates the gripper assembly 50 around the Y axis. Rotation around the Y axis allows the gripper assembly 50 to transfer the cartridges 20 between (i) the storage bins 14 in the doors 42A, 42B, and (ii) storage bins 14 on the mid-wall 34, the cartridge readers 18 or the transport mechanism 22.

From the above cited paragraph, several important distinctions between what *Williams* teaches and the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” as recited in claim 1 of the present invention, can be seen. First, the “guides” described by *Williams* are attached to the “handling mechanism mover 48” and not to the housing, as recited in claim 1 of the present invention. Therefore, *Williams* does not teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Williams* does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Additionally, the “guides,” as taught by *Williams*, are not configurable, as recited in claim 1 of the present invention. *Williams* teaches that one pair of “guides” is vertical and forms the x-axis whiles the other pair of “guides” are horizontal and forms the y-axis. Both pairs are attached to the “handling mechanism mover 48.” There is no indication in Figure 3, the above cited paragraph, or anywhere in *Williams* that these guides are configurable, that is, that their configuration can be changed, other than having a single guide or a pair of guides attached the handling mechanism mover. This is quite different than “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” as recited in claim 1 of the present invention. Therefore, *Williams* does teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Williams* does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Furthermore, in the above cited passage, *Williams* does not teach “substantially parallel rows of configurable instances of tracks,” as recited in claim 1 of the present invention. *Williams* teaches a single instance of a pair of parallel guides which go horizontally, and another single instance of a pair of parallel guides which go vertically. Therefore the guides are not parallel to each other. Also, there are not instances of parallel rows but only a single instance. Therefore, *Williams* does not teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Williams* does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Therefore, for all the reasons stated above, Applicants believe that *Williams* does not teach all the features of rejected amended independent claim 1. Accordingly, Applicants respectfully submit that claim 1 is patentable over the *Williams* reference.

Regarding independent claim 22, the Examiner has stated:

Regarding claim 22, as far as it is understood, *Williams* discloses a removable-unit storage network, comprising:
multiple removable-unit storage modules 11; and
bridge tracks 88 which connect the storage modules;

wherein the bridge tracks allow robotic hands 68 to move between tracks.

(Office Action, August 11, 2004, page 5).

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Williams* reference cited by the Examiner does not anticipate the present invention as recited in claim 22, because *Williams* fails to teach each and every element of claim 22.

Amended independent claim 22 recites:

22. A removable-unit storage network, comprising:
multiple removable-unit storage modules; and
bridge tracks which connect the storage modules;
wherein the bridge tracks allow robotic hands to move between
module tracks, wherein the module tracks are substantially parallel rows
of configurable instances of tracks attached to the housing of the storage
module on which the robotic hands travel.

Williams does not teach each and every feature of the presently claimed invention in claim 22. Claim 22 recites the feature of “bridge tracks which connect the storage modules.” *Williams* does not teach this feature. The Examiner points to element 88 in Figures 2 and 5-8 as teaching this feature. However, element 88 is not the same as the feature of “bridge tracks which connect the storage modules.” Instead, *Williams* teaches that element 88 is a “carriage guide.” (*Williams*, col. 6, line 19). The carriage guide is part of mover 66, (*Williams*, col. 6, lines 19-20) which in turn is part of transport mechanism 22. (*Williams*, col. 5, line 48). “The transport mechanism 22 includes a frame 64, a mover 66 and a transporter 68.” (*Williams*, col. 5, lines 47-48). The carriage guide is attached to the back wall of the frame:

In the embodiment illustrated in the Figures, the carriage guide 88 is secured to the back wall 76, near each end 80, 82 with a pair of spaced apart carriage guide supports 94 (one carriage guide support 94 is

illustrated in FIG. 5 and the other carriage guide support 94 is illustrated in FIG. 9).

(*Williams*, col. 6 lines 26-32).

It is the frame which actually connects one library to another:

The frame 64 supports the components of the transport mechanism 22 and extends between the tape libraries 11.

(*Williams*, col. 5 line 61-62).

Therefore, *Williams* does not teach the feature of “bridge tracks which connect the storage modules.” Thus, *Williams* does not anticipate the present invention as recited in claim 22, because *Williams* fails to teach each and every element of claim 22.

Additionally, independent claim 22 recites the feature of “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” *Williams* does not teach this feature. The Examiner has pointed to element 68 as teaching this feature. However *Williams* does not teach that element 68 is a robotic hand:

The transporter 68 receives the cartridge 20 and is moved by the mover 66 between the adjacent tape libraries 11. The design of the transporter 68 can be varied to suit the design requirements of the transport mechanism 22. In the embodiment illustrated in the Figures, the transporter 68 includes a receiver body 136, a carriage 138, and a latch 140. The receiver body 136, the carriage 138 and the latch 140 all move together along the frame 64. However, the receiver body 136 and the latch 140 pivot relative to the carriage 138 at different rates.

The receiver body 136 is generally rectangular shaped and includes a bottom 142, a top 144, opposed sides 146 and a back 148 which cooperate to define a rectangular shaped receiver slot 150. The bottom 142 includes a pair of spaced apart lips 151 which extend upward near the opening for the receiver slot 150. The lips 151 are used in conjunction with the latch 140 as provided below to selectively retain the cartridge 20 in the receiver slot 150. The top 144 includes a cutout 152 that allows the latch 140 to contact the cartridge 20 as described below.

The receiver slot 150 is sized and shaped to receive one of the cartridges 20. Thus, the design of the receiver body 136 can be varied according to the design of the cartridge 20.

(*Williams*, col. 7, lines 35-57).

As can be seen from the above cited passage, element 68, the transporter, consists of the receiving unit, a carriage unit, for transporting the receiving unit and a latch. The receiving unit is simply a bucket specially designed to handle tape cartridges; it is not a robotic hand. Rather it is the gripper assembly which actually handles the cartridges, as explained in the above cited passage, beginning on column 4, line 54 and continuing through column 5 line 3. Therefore *Williams* does not teach the feature of “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” Thus, *Williams* does not anticipate the present invention as recited in claim 22, because *Williams* fails to teach each and every element of claim 22.

Furthermore, the transporter only travels along the carriage guide, which, as explained above, is only attached to the frame of the transport mechanism. Therefore, the carriage guide does not connect to tracks. Thus, it follows that the transporter cannot travel between tracks via the carriage guide. Therefore, *Williams* does not teach the feature of “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” Thus, *Williams* does not anticipate the present invention as recited in claim 22, because *Williams* fails to teach each and every element of claim 22.

Therefore, for all the reasons stated above, Applicants believe that *Williams* does not teach all the features of rejected independent claim 22. Accordingly, Applicants respectfully submit that claim 22 is patentable over the *Williams* reference.

Claims 2-4, 6 and 12-16 are dependent claims depending from independent claim 1. As Applicants have already demonstrated that claim 1 is patentable over the *Williams* reference, Applicants submit that dependent claims 2-4, 6 and 12-16 are patentable over the *Williams* reference at least by virtue of depending from an allowable claim.

Additionally, several claims recite other additional combinations of features not suggested by the reference. Consequently, Applicants respectfully submit that the rejection of claims 2-4, 6 and 12-16 have been overcome.

For example, claim 3 recites the feature of “wherein storage cells, robotic hands and module tracks are on both sides of the storage module.” The Examiner points to Figure 2 as teaching this feature. However, Figure 2 illustrates two tape libraries side-by-side with storage cells on the back walls and doors of the libraries:

In the embodiment illustrated in the FIG. 2, one hundred and seventy storage bins 14 are secured to the mid-wall 34, ninety-six storage bins 14 are secured to the left door 42B and sixty storage bins 14 are secured to the right door 42A of each tape library 11.
(*Williams*, col. 4, lines 18-23).

Figure 2 does not illustrate tracks or robotic hands. However, *Williams* does not teach that there are “robotic hands and module tracks are on both sides of the storage module,” as recited in claim 3 of the present invention. *Williams* states:

Rotation around the Y axis allows the gripper assembly 50 to transfer the cartridges 20 between (i) the storage bins 14 in the doors 42A, 42B, and (ii) storage bins 14 on the mid-wall 34, the cartridge readers 18 or the transport mechanism 22.
(*Williams*, col. 4, line 66 – col. 5, line 3).

The above cited passage teaches that the robot and tracks are located in one place, the center of the storage module. The ability of the gripper assembly to rotate about its y-axis allows the gripper assembly to access tapes on both walls of the storage module. However, this is not the same as the recited feature of “wherein storage cells, robotic hands and module tracks are on both sides of the storage module.” Therefore, *Williams* does not teach the feature of “wherein storage cells, robotic hands and module tracks are on both sides of the storage module.” Thus, *Williams* does not anticipate the present invention as recited in claim 3, because *Williams* fails to teach each and every element of claim 3.

Claim 4 recites the feature of “an elevator mechanism for moving robotic hands from one row of module tracks to another.” The Examiner points to Figure 3 as teaching

this feature. However, Figure 3 does not teach this feature. Instead, as discussed above regarding claim 1, Figure 3 teaches that the guides are attached to, or part of, the handling mechanism mover. *Williams*, in column 4, line 54 and continuing through column 5 line 3, cited above, teaches that there is a vertical actuator for moving the gripper assembly along the handling mechanism mover's vertical guide and a horizontal actuator for moving the gripper assembly along the handling mechanism mover's horizontal guide. The actuators do not move the gripper assembly "from one row of module tracks to another," as recited in claim 4 of the present invention. Rather, they only move the gripper assembly back and forth on the same guide. Therefore, *Williams* does not teach the feature of "an elevator mechanism for moving robotic hands from one row of module tracks to another." Thus, *Williams* does not anticipate the present invention as recited in claim 4, because *Williams* fails to teach each and every element of claim 4.

Claim 6 recites the feature of "bridge tracks to connect the rows of module tracks on opposite sides of the storage module, and to connect rows of module tracks on one storage module to rows of module tracks on another storage module." *Williams* does not teach this feature. The Examiner has pointed to Figure 2 as teaching this feature. Instead, Figure 2 shows two different libraries being connected by a transport mechanism. Specifically, by the transport mechanism's frame, as was discussed above regarding claim 22. Additionally, as was discussed above regarding claims 1, 3 and 4, the guides are part of the handling mechanism mover and do not exist anywhere else. Therefore, it follows that neither Figure 2 nor any other part of *Williams* can teach the feature of "bridge tracks to connect the rows of module tracks on opposite sides of the storage module, and to connect rows of module tracks on one storage module to rows of module tracks on another storage module." Thus, *Williams* does not anticipate the present invention as recited in claim 6, because *Williams* fails to teach each and every element of claim 6.

Regarding claim 16, claim 16 has been cancelled.

Therefore, the rejection of claims 1-4, 6, 12-16, and 22 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Williams* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Williams* actually teaches away

from the presently claimed invention because it teaches a cartridge handling mechanism with two guides, wherein the cartridge handling mechanism moves along the guides and also rotates around one of the guides. These guides are part of the mechanism itself. The cartridge handling mechanism moves along the guides in between rows of tape storage bins. By rotating about one of the guides, the cartridge handling mechanism is able to retrieve storage bins which face each other. In contrast, the presently claimed invention recites “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” As *Williams* teaches only a single instance of guides, which are attached to the cartridge handling mechanism, absent the Examiner pointing out some teaching or incentive to implement *Williams* and “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” one of ordinary skill in the art would not be led to modify *Williams* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Williams* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants’ disclosure as a template to make the necessary changes to reach the claimed invention.

VI. 35 U.S.C. § 102, Anticipation, Claims 1-4, 6, 12-16, and 22

The Examiner has rejected claims 1-4, 6, 12-16, and 22 under 35 U.S.C. § 102 as being anticipated by Toumbas (U.S. Pat. 5,940,356), hereinafter “*Toumbas*”. This rejection is respectfully traversed.

Specifically, the Office action states:

Regarding claim 1, as far as it is understood, Toumbas discloses a removable-unit storage module (figures 1-63), comprising:

a housing (figure 11);

storage cells 5 arranged within the housing (figure 17);

robotic hands to retrieve objects from the storage cells (figure 52);

and

substantially parallel rows 15 of configurable instances of tracks attached to the housing on which the robotic hands travel;

wherein the module is mobile (column 2, lines 51-54).

(Office Action, August 11, 2004, page 6).

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Toumbas* reference cited by the Examiner does not anticipate the present invention as recited in claim 1, because *Toumbas* fails to teach each and every element of claim 1.

Amended independent claim 1 recites:

1. A removable-unit storage module, comprising:
 - a housing;
 - storage cells arranged within the housing, wherein the storage cells contain a plurality of objects;
 - robotic hands to retrieve the plurality of objects from the storage cells; and
 - module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.

Toumbas does not teach each and every feature of the presently claimed invention in claim 1. *Toumbas* does not teach the feature of “storage cells arranged within the housing, wherein the storage cells contain a plurality of objects.” The Examiner has stated that element 5 of Figure 17 teaches this feature. Instead, *Toumbas* teaches that element 5 is a “DC” or disc case and that is shaped specifically to hold a single CD:

The Disk Case (DCs) is presented in FIG. 32-35 and is the case on which every new CD is placed in order to be carried around the system. The DCs is appropriately formed to facilitate its placement in the SU, its movement throughout the system and its insertion in the CD player.

(*Toumbas*, col. 4, lines 53-57)

Therefore, the storage system taught by *Toumbas* cannot contain “a plurality of objects,” as recited in amended claim 1 of the present invention. Therefore, *Toumbas* does not teach the feature of “storage cells arranged within the housing, wherein the storage cells

contain a plurality of objects.” Thus, *Williams* does not anticipate the present invention as recited in claim 1, because *Williams* fails to teach each and every element of claim 1.

Additionally, claim 1 recites the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” *Toumbas* does not teach this feature. The Examiner points to element 15 in Figure 7 as teaching this feature. However, element 15 of Figure 7 is not the same as “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” as recited in claim one of the present invention. Instead, *Toumbas* teaches that element 15 is the “Z direction carrier (ZC) motion spur gears.” (*Toumbas*, col. 4, line 27). These are not configurable. They are built into the control unit, and neither the position of the ZC motion spur gears within the unit, nor the configuration of the ZC motion spur gears in the storage module can be changed, as illustrated by Figure 7 of *Toumbas* reproduced below for the convenience of the Examiner.

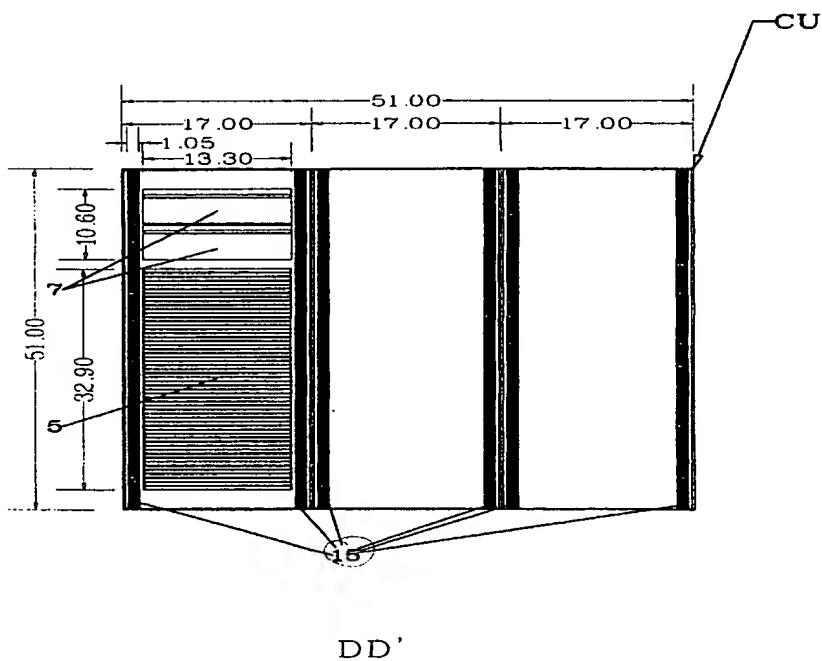
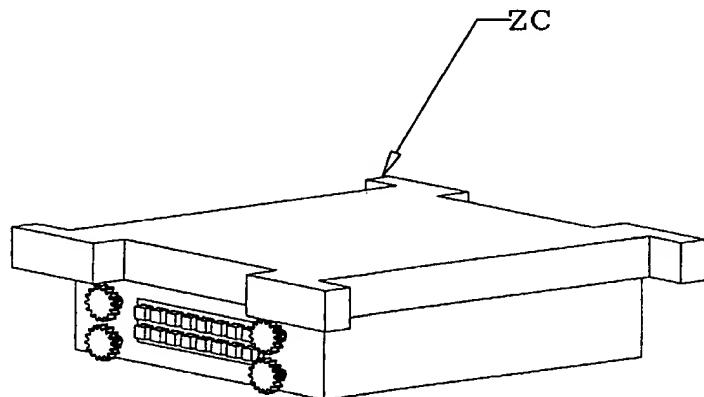


Figure 52 of *Toumbas* reproduced below for the convenience of the Examiner, shows the position of elements 49, the “gears to facilitate it’s movement through the DTC,” (*Toumbas*, col. 4, lines 64-65) on the ZC and provides further proof that the ZC motion spur gears are not configurable, as the gears are in one fixed place.



Therefore, *Toumbas* does not teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Toumbas* does not anticipate the present invention as recited in claim 1, because *Toumbas* fails to teach each and every element of claim 1.

Therefore, for all the reasons stated above, Applicants believe that *Toumbas* does not teach all the features of rejected independent claim 1. Accordingly, Applicants respectfully submit that claim 1 is patentable over the *Toumbas* reference.

Regarding claims 16-21, as the claims have been cancelled, the rejection is moot. Therefore, the rejection of claims 1 and 16-21 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Toumbas* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Toumbas* actually teaches away from the presently claimed invention because it teaches a very specific configuration for the gear tracks, wherein the gear tracks are in a fixed, unchangeable position within the storage module, as illustrated by figure 7, shown above. In contrast, the presently claimed

invention recites “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” As *Toumbas* teaches non-configurable tracks, absent the Examiner pointing out some teaching or incentive to implement *Toumbas* and “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” one of ordinary skill in the art would not be led to modify *Toumbas* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Toumbas* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants’ disclosure as a template to make the necessary changes to reach the claimed invention.

VII. 35 U.S.C. § 102, Anticipation, Claims 22-26

The Examiner has rejected claims 22-26 under 35 U.S.C. § 102 as being anticipated by Luffel (U.S. Pat. 6,222,699), hereinafter “*Luffel*”. This rejection is respectfully traversed.

Specifically, the Office action states:

Regarding claim 22, Luffel et al discloses a removable-unit storage network (see figure 5), comprising:
multiple removable-unit storage modules 226; and
bridge tracks 260 which connect the storage modules;
wherein the bridge tracks allow robotic hands 236 to move
between tracks.

(Office Action, August 11, 2004, page 7).

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Luffel* reference cited by the Examiner does not anticipate the present invention as recited in claim 22, because *Luffel* fails to teach each and every element of claim 22.

Amended independent claim 22 recites:

22. A removable-unit storage network, comprising:
multiple removable-unit storage modules; and
bridge tracks which connect the storage modules;
wherein the bridge tracks allow robotic hands to move between
module tracks, wherein the module tracks are substantially parallel rows
of configurable instances of tracks attached to the housing of the storage
module on which the robotic hands travel.

Luffel does not teach each and every feature of the presently claimed invention in claim 22. Claim 22 recites the feature of “bridge tracks which connect the storage modules.”

Luffel does not teach this feature. The Examiner points to element 260 in Figure 5 as teaching this feature. *Luffel* teaches that element 260 is an “elevator module” (*Luffel*, col. 6, line 32). *Luffel* further teaches that the elevator modules are “adapted to receive the cartridge access device 136 and vertically translate the cartridge access device among the plurality of levels 90, 82, etc.” (*Luffel*, col. 5, lines 42-45). An elevator module, which raises and lowers cartridge access devices, is not the same thing as bridge tracks. As *Luffel* does not teach bridge tracks, it follows that *Luffel* does not teach the feature of “bridge tracks which connect the storage modules.” Thus, *Luffel* does not anticipate the present invention as recited in claim 22, because *Luffel* fails to teach each and every element of claim 22.

Furthermore, claim 22 recites the feature of “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” *Luffel* does not teach this feature. The Examiner points to element 236 of Figure 5 as teaching this feature. It does not teach this feature. Instead, *Luffel* teaches that element 236 is the cartridge access device, which moves about a storage module on one track and can then use an elevator module to travel to another storage module. As was discussed above, *Luffel* does not teach the use bridge tracks. Therefore, it follows that *Luffel* does not teach the feature of “wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing

of the storage module on which the robotic hands travel.” Thus, *Luffel* does not anticipate the present invention as recited in claim 22, because *Luffel* fails to teach each and every element of claim 22.

Additionally, *Luffel* also does not teach “wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” *Luffel* teaches that tracks are not configurable, they must occur in a specific place and their position cannot be altered:

The modular units 16, 18, FIG. 1, may also comprise a plurality of gear racks 50, 52, 54 wherein at least one gear rack extends laterally across each of the modular units 16, 18. Preferably, each modular unit, e.g., 16, comprises an upper gear rack 50 and an identical lower gear rack 52. The phrase “gear rack(s)” will hereinafter refer to either the upper or the lower gear rack(s). Referring to FIGS. 1 and 2, the cartridge access device 36 may comprise at least one pinion gear 38, 40 (FIG. 2) attached to the cartridge access device 36 which is adapted to engage the gear racks 50, 52, 54. Preferably, the cartridge access device 36 comprises an upper pinion gear 38 that contacts the upper gear racks (e.g., 50) and an identical lower pinion gear 40 that contacts the lower gear racks 52, 54. The phrase “pinion gear” will hereinafter refer to either the upper or the lower pinion gear. The gear racks (e.g., 52, 54) of adjacent modular units 16, 18 are substantially in alignment and positioned adjacent one another such that the cartridge access device 36 may be translated laterally among the adjacent modular units 16, 18.

(*Luffel*, col. 4, lines 42-60).

Looking at Figure 1 of *Luffel*, reproduced below for the convenience of the Examiner, which shows two storage modules connected to each other, it can be seen that due to the design of the storage module and the size of the cartridge access device, the gear racks 52 and 54 must be positioned where they are and there is no way to configure them any differently.

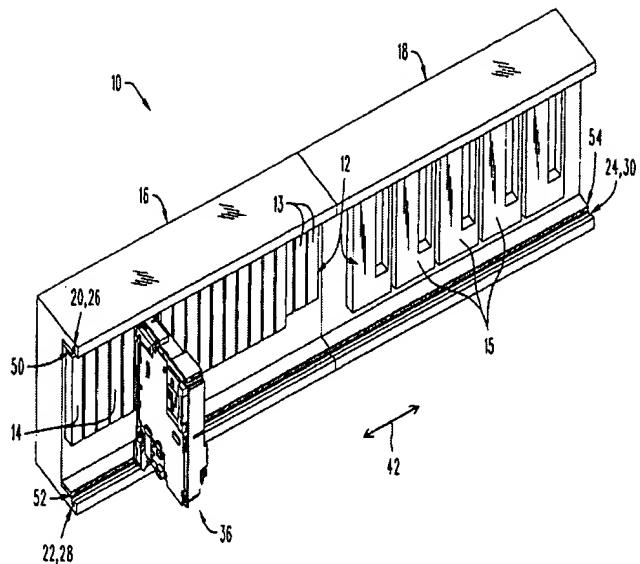


FIG. 1

If the gear racks cannot change configurations, then they are not configurable. Therefore, it follows that *Luffel* does not teach the feature of “wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” Thus, *Luffel* does not anticipate the present invention as recited in claim 22, because *Luffel* fails to teach each and every element of claim 22.

Therefore, for all the reasons stated above, Applicants believe that *Luffel* does not teach all the features of rejected independent claim 22. Accordingly, Applicants respectfully submit that claim 22 is patentable over the *Luffel* reference.

Claims 23-26 are dependent claims depending from independent claim 22. As Applicants have already demonstrated that claim 22 is patentable over the *Luffel* reference, Applicants submit that dependent claims 23-26 are patentable over the *Luffel* reference at least by virtue of depending from an allowable claim. Additionally, several claims recite other additional combinations of features not suggested by the reference.

Consequently, Applicants respectfully submit that the rejection of claims 23-26 has been overcome.

For example, claim 23 recites “wherein the bridge tracks allow robotic hands to move between module tracks on different storage modules and retrieve objects from the modules.” As was discussed above in regards to independent claim 22, *Luffel* does not teach the use of bridge tracks. Thus, it follows that *Luffel* does not teach the feature of “wherein the bridge tracks allow robotic hands to move between module tracks on different storage modules and retrieve objects from the modules.” Therefore, *Luffel* does not anticipate the present invention as recited in claim 23, because *Luffel* fails to teach each and every element of claim 23.

Claim 24 recites the feature of “wherein the bridge tracks can be dynamically connected to and disconnected from module tracks on the storage modules.” This feature is not taught by *Luffel*. The Examiner points to element 112 of Figure 3 as teaching this feature. Element 112 is the lift mechanism, which is part of the lift module. (see *Luffel*, col. 5, lines 40-41). As was discussed above regarding independent claim 22, *Luffel* does not teach bridge tracks. Therefore, it follows that *Luffel* does not teach the feature of “wherein the bridge tracks can be dynamically connected to and disconnected from module tracks on the storage modules.” Thus, *Luffel* does not anticipate the present invention as recited in claim 24, because *Luffel* fails to teach each and every element of claim 24.

Additionally, *Luffel* does not disclose, in any passage or figure, that the elevator module may be disconnected dynamically, that is, while the system is in operation. Therefore, *Luffel* does not teach the feature of “wherein the bridge tracks can be dynamically connected to and disconnected from module tracks on the storage modules.” Thus, *Luffel* does not anticipate the present invention as recited in claim 24, because *Luffel* fails to teach each and every element of claim 24.

Claim 26 recites the feature of “wherein several rows of bridge tracks can be connected to and disconnected as a unit from module tracks on the storage modules.” This feature is not taught by *Luffel*. The Examiner points to figures 3 and 5 as teaching this feature. Figures 3 and 5 show elevator modules. As was discussed above regarding independent claim 22, *Luffel* does not teach bridge tracks. Therefore, it follows that *Luffel*

does not teach the feature of “wherein several rows of bridge tracks can be connected to and disconnected as a unit from module tracks on the storage modules.” Thus, *Luffel* does not anticipate the present invention as recited in claim 26, because *Luffel* fails to teach each and every element of claim 26.

Furthermore, no where does *Luffel* teach that separate elevator modules can be removed as a unit. *Luffel* states:

The system 100 of **FIG. 3** includes at least one cartridge access device 136. If a multi-level system such as that shown in **FIG. 3** does not comprise at least one cartridge access device 136 on each level 90, 92, 94, 96, the system must include at least one elevator module 110. The elevator module 110 extends along each of the levels 90, 92, 94, 96 and may comprise a lift mechanism 112 which is adapted to receive the cartridge access device 136 and vertically translate the cartridge access device among the plurality of levels 90, 92, etc. The lift mechanism 112 may be controlled by the computer system described in '208 via a wireless communications link. For example, the lift mechanism 112 may comprise a communications device (not shown) which is configured to receive a wireless signal. The elevator module 110 may further comprise a shaft 114 sized and shaped to allow the lift mechanism 112 to pass therethrough, and a guide rail 116 adapted to vertically guide the lift mechanism 112. To maintain maximum flexibility, the shaft 114 and the guide rail 116 may be divided into modular sections 120, 122, 124, 126 which may each be integrated into modular units (e.g., 62, 68, 74, 80, respectively) with other modules such as cartridge-receiving modules as shown in **FIG. 3**. Alternatively, each of the modular sections 120, 122, 124, 126 may be incorporated within separate modular units (not shown) which are adapted to attach to other modular units.

(*Luffel*, col. 5, line 36-65).

The above cited paragraph teaches that elevator modules can be large, individual modules that are several modules tall. Or, the elevator modules can be small modules, equal in height to regular storage modules. If the lift module is one large unit, then what is being connected and disconnected is a single elevator unit. A single elevator unit is not “several rows of bridge tracks.” Therefore, connecting and disconnecting a single elevator module is not “wherein several rows of bridge tracks can be connected to and disconnected as a unit from module tracks on the storage modules.”

Furthermore, nowhere does *Luffel* teach connecting or disconnecting more than one elevator module at a time. Therefore, it follows that *Luffel* does not teach the feature of “wherein several rows of bridge tracks can be connected to and disconnected as a unit from module tracks on the storage modules.”

Thus, for all the reasons stated above, *Luffel* does not anticipate the present invention as recited in claim 26, because *Luffel* fails to teach each and every element of claim 26.

Therefore, the rejection of claims 22-26 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Luffel* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Luffel* actually teaches away from the presently claimed invention because it teaches only a single instance of tracks within each module, which connect to each other in order to connect the modules together. In contrast, the presently claimed invention recites “bridge tracks which connect the storage modules, wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel.” As *Luffel* teaches only a single instance of tracks within each module, which connect to each other in order to connect the modules together, absent the Examiner pointing out some teaching or incentive to implement *Luffel* and “bridge tracks which connect the storage modules, wherein the bridge tracks allow robotic hands to move between module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel,” one of ordinary skill in the art would not be led to modify *Luffel* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Luffel* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants’ disclosure as a template to make the necessary changes to reach the claimed invention.

VIII. 35 U.S.C. § 102, Anticipation, Claims 1 and 5

The Examiner has rejected claims 1 and 5 under 35 U.S.C. § 102 as being anticipated by Pignataro (U.S. Pat. 5,940,356), hereinafter “*Pignataro*”. This rejection is respectfully traversed.

Specifically, the Office Action states:

Regarding claim 1, as far as it is understood, Pignataro discloses a removable-unit storage module 11 (figures 1-4), comprising:
a housing 45, 48;
storage cells 39 arranged within the housing;
robotic hands 51 to retrieve objects from the storage cells; and
substantially parallel rows 50 of configurable instances of tracks attached to the housing on which the robotic hands travel;
wherein the module is mobile (see column 4, lines 29-33).

(Office Action, August 11, 2004, page 8).

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Pignataro* reference cited by the Examiner does not anticipate the present invention as recited in claim 1, because *Pignataro* fails to teach each and every element of claim 1.

Amended independent claim 1 recites:

1. A removable-unit storage module, comprising:
a housing;
storage cells arranged within the housing, wherein the storage cells contain a plurality of objects;
robotic hands to retrieve the plurality of objects from the storage cells; and
module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.

Pignataro does not teach each and every feature of the presently claimed invention in claim 1. Claim 1 recites the feature of “module tracks, wherein the module tracks are

substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” *Pignataro* does not teach this feature. The Examiner points to element 50 in Figure 4 as teaching this feature. However, *Pignataro* does not teach this feature. Element 50 is a slide which can carry a robot. (*Pignataro*, col. 4, line 25). *Pignataro* teaches:

Surrounding the structure 35 there are eight equally spaced vertical columns 45 which can, for example, be of I-section steel extending upwardly from the ground, supported in the basement by piers 46, and carrying on them respective elevating carriages 47 (FIG. 4), the carriages supporting an octagonal ring 48, the straight sides 49 of which form tracks for slides 50 which can move independently. The slides 50 also carry robots 51, only one of which is shown in FIG. 4.

(*Pignataro*, col. 4, line 20-27).

The above cited passage teaches that slides move on an octagon shaped ring which is attached to columns 45. This octagonal ring cannot be re-configured once it has been built. Therefore, the tracks upon which slide 50 travels are not “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Therefore, it follows that *Pignataro* does not teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Pignataro* does not anticipate the present invention as recited in claim 1, because *Pignataro* fails to teach each and every element of claim 1.

Additionally, the above cited passage teaches that octagonal ring is attached to columns. However, the columns are not the housing for the storage cells. Rather the housing for the storage cells is element 36, which is eight walls, as explained in the following paragraph of *Pignataro*:

This problem is largely overcome in a second embodiment wherein the storage facility comprises a large storage structure 35 which may be circular in section but is preferably multi-sided as shown in FIGS. 2 and

4. As illustrated, the structure 35 is octagonal in plan (as in the first embodiment) comprising eight walls 36, each of which, however, is apertured to give a plurality of loading apertures 37, and the inner wall 38 comprises a plurality of relatively short vertical portions between horizontal portions giving a grid effect which establish a large number of compartments 39 loaded through apertures 37 (similar to compartments 18) defined by surfaces extending between inner and outer wall surfaces. In order to load merchandise into the apertures 37, there is provided a loading elevator 40 which may be elevated within the hollow shaft of the structure 35 and can carry merchandise upwardly in the manner of an elevator of known type. The storage area is designated 41, and this is a basement beneath the ground level, and surmounted by a floor 42 containing surfaces 43 which define an access opening 44 for the elevator 40.

(*Pignataro*, col. 4, lines 1-19).

Therefore, it can be seen that the octagonal ring is attached to a structure other than the housing for the storage cells. Thus, the octagonal ring cannot be “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” as it is not attached to the same housing as the storage cells. Therefore, it follows that *Pignataro* does not teach the feature of “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Thus, *Pignataro* does not anticipate the present invention as recited in claim 1, because *Pignataro* fails to teach each and every element of claim 1.

Therefore, for all the reasons stated above, Applicants believe that *Pignataro* does not teach all the features of rejected independent claim 1. Accordingly, Applicants respectfully submit that claim 1 is patentable over the *Pignataro* reference.

Claim 5 is a dependent claim depending from independent claim 1. As Applicants have already demonstrated that claim 1 is patentable over the *Pignataro* reference, Applicants submit that dependent claim 5 is patentable over the *Pignataro* reference at least by virtue of depending from an allowable claim. Additionally, claim 5 recites other additional combinations of features not suggested by the reference. Claim 5 recites the feature of “wherein the module tracks spiral around the storage module from bottom to top.” *Pignataro* does not teach this feature. The Examiner points to figure 4 as

teaching this feature. While figure 4 does show two parallel tracks spiraling around the structure, the tracks are actually conveyor belts upon which the robots place merchandise:

Between the structure 35 and the octagonal ring 48 there is located a spiral chute 54 which has a central division 55, the division dividing the chute into an inner chute and an outer chute. As described below the robots 51 will selectively deposit merchandise from the compartments 39 into the inner or outer chute portions to be either delivered to the left or right-hand linear transfer conveyor 56. In having two conveyors, the one building can service two customers at the same time, as in the first embodiment. If more than two divisions are used in the transfer conveyor, gates operate to separate orders. These are not shown.

(*Pignataro*, col. 4, lines 33-43).

Conveyor belts are not module tracks, as module tracks are “substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” Therefore, it follows that *Pignataro* does not teach the feature of “wherein the module tracks spiral around the storage module from bottom to top.” Thus, *Pignataro* does not anticipate the present invention as recited in claim 5, because *Pignataro* fails to teach each and every element of claim 5.

Consequently, Applicants respectfully submit that the rejection of claim 5 has been overcome.

Therefore, the rejection of claims 1 and 5 under 35 U.S.C. § 102 has been overcome.

Furthermore, *Pignataro* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Pignataro* actually teaches away from the presently claimed invention because it teaches a single instance of track, wherein either one robot moves around it, or in another embodiment, the track is divided into 8 sections, which move up and down, independently of each other, so that each robot handles one column of storage cells, by itself as explained by *Pignataro*.

The ring 49 is shown as a single ring surrounding the storage structure 35, but it may be subdivided into eight independently actuated linear robot carriage guides 62, each with its own robot 51, so that the robots can operate independently at different levels, thus still further reducing time.

(*Pignataro*, col. 5, lines 33-40).

Therefore, there are still not instances of parallel tracks. In contrast, the presently claimed invention recites “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel.” As *Pignataro* teaches only a single instance of a track and that there is no need for multiple rows of tracks, absent the Examiner pointing out some teaching or incentive to implement *Pignataro* and “module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel,” one of ordinary skill in the art would not be led to modify *Pignataro* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Pignataro* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants’ disclosure as a template to make the necessary changes to reach the claimed invention.

IX. 35 U.S.C. § 103, Obviousness, Claims 27-35

The Examiner has rejected claims 27-35 under 35 U.S.C. § 103 as being unpatentable over *Luffel* in view of *Korngiebel et al* (U.S. Pat. 5,416,914), hereinafter “*Korngiebel*”. This rejection is respectfully traversed.

Applicants respectfully submit that the rejections of claims 27-35 under 35 U.S.C. § 103(a) are improper under 35 U.S.C. § 103(c). 35 U.S.C. § 103(c), effective November 29, 1999, reads as follows:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Applicants respectfully submit that the present application and *Korngiebel* were, at the time the invention of the present application was made, commonly owned by Storage Technology Corporation. *See* 1241 O.G. 97 (December 26, 2000), which states

that an Applicant or Applicant's attorney may, pursuant to 35 U.S.C. §103(c), overcome a rejection by making a conspicuous statement that the application under examination and cited reference were commonly owned at the time the invention of the application under examination was made.

The present invention was filed on December 18, 2000, which is dated after November 29, 1999. In addition, the present invention and the *Korngiebel* reference were, at the time the invention was made, owned by the same entity or subject to an obligation of assignment to the same entity, i.e., Storage Technology Corporation. Therefore, under 35 U.S.C. § 103(c), *Korngiebel* is disqualified as prior art under 35 U.S.C. §103 against the claims of the present application. *See* MPEP § 2146.

In view of the above, Applicants respectfully request withdrawal of the rejections to claims 27-35 under 35 U.S.C. § 103(a)

X. 35 U.S.C. § 103, Obviousness, Claims 7, 8 and 11

The Examiner has rejected claims 7, 8 and 11 under 35 U.S.C. § 103 as being unpatentable over *Williams* in view of *Luffel*. This rejection is respectfully traversed.

Specifically, the Office action states:

Regarding claims 7-8 and 11, Williams discloses the removable-unit storage module described above. Williams does not disclose that the bridge tracks can be connected and disconnected dynamically or independently or as a column. Luffel et al discloses a removable-unit storage module where the bridge tracks can be connected and disconnected dynamically or independently or as a column (see figures 3 and 5 where the bridge tracks can perform as claimed). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the removable-unit storage module of Williams with the bridge tracks that can be connected and disconnected dynamically or independently or as a column as taught by Luffel.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the removable-unit storage module of Williams with the bridge tracks that can be connected and disconnected dynamically or independently or as a column as taught by Luffel as doing this would reduce the time of transfer of a cartridge between modules.

(Office Action, August 11, 2004, page 10).

A fundamental notion of patent law is the concept that invention lies in the new combination of old elements. Therefore, a rule that every invention could be rejected as obvious by merely locating each element of the invention in the prior art and combining the references to formulate an obviousness rejection is inconsistent with the very nature of "invention." Consequently, a rule exists that a combination of references made to establish a *prima facie* case of obviousness must be supported by some teaching, suggestion, or incentive contained in the prior art which would have led one of ordinary skill in the art to make the claimed invention.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Additionally, in comparing *Williams* to the claimed invention, the claim limitations of the presently claimed invention may not be ignored in an obviousness determination.

Claim 7 is a dependent claim, depending from dependent claim 6 and independent claim 1. As was discussed above with regard to claim 1, *Williams* does not teach the features of "storage cells arranged within the housing, wherein the storage cells contain a plurality of objects" and "module tracks, wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing on which the robotic hands travel." Additionally, as was discussed above in regard to claim 6, *Williams* also fails to teach the feature of "bridge tracks to connect the rows of module tracks on opposite sides of the storage module, and to connect rows of module tracks on one storage module to rows of module tracks on another storage module."

Luffel does not cure the deficiencies of *Williams*. *Luffel* does not teach the feature of "storage cells arranged within the housing, wherein the storage cells contain a plurality of objects." Instead, *Luffel* teaches a modular unit for the storage of cartridges only:

The present invention is directed to a modular data storage system for handling and storing cartridges.

(*Luffel*, col. 2, lines 40-41).

Therefore, *Luffel* does not teach the feature of “storage cells arranged within the housing, wherein the storage cells contain a plurality of objects,” which is missing from *Williams*. Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

Additionally, as was discussed above regarding claim 22, *Luffel* does not teach bridge tracks. Therefore, it follows that *Luffel* does not teach the feature of “bridge tracks to connect the rows of module tracks on opposite sides of the storage module, and to connect rows of module tracks on one storage module to rows of module tracks on another storage module,” missing from *Williams*. Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

Further, as was discussed above regarding claim 22, *Luffel* does not teach the feature of “wherein the module tracks are substantially parallel rows of configurable instances of tracks attached to the housing of the storage module on which the robotic hands travel,” which is missing from *Williams*. Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

Moreover, the Examiner has admitted that *Williams* does not teach the feature of “wherein the bridge tracks can be connected to and disconnected from the storage module dynamically.” However, *Luffel* does not teach this feature either. As was discussed above in regards to claim 24, *Luffel* does not teach the use of bridge tracks nor does *Luffel* connecting and disconnecting bridge tracks, or any tracks, dynamically. Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

Claim 8 is a dependent claim depending on dependent claim 7. Therefore, the distinctions that exist between the cited references and claim 7 exist for claim 8. Furthermore, claim 8 recites the additional feature of “wherein the bridge tracks can be connected and disconnected from the storage module independently of each other.” As was discussed above in regards to claim 22, *Luffel* does not teach the use of bridge tracks. Therefore it follows that *Luffel* does not teach the feature of “wherein the bridge tracks can be connected and disconnected from the storage module independently of each

other.” Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

Claim 11 is a dependent claim depending on dependent claim 7. Therefore, the distinctions that exist between the cited references and claim 7 exist for claim 11. Furthermore, claim 8 recites the additional feature of “wherein the bridge tracks can be connected and disconnected from the storage module together as a column.” As was discussed above in regards to claim 26, *Luffel* does not teach the use of bridge tracks, nor does teach the feature of “wherein the bridge tracks can be connected and disconnected from the storage module independently of each other.” Thus, the proposed combination does not result in the claimed invention. Accordingly, the Examiner has failed to state a *prima facie* case of obviousness.

In view of the above, Applicant’s submit that dependent claim 7, 8 and 11 are not taught by the combination of *Williams* and *Luffel*. Accordingly, Applicant’s respectfully request withdrawal of the rejection of claims 7, 8 and 11 under 35 U.S.C. § 103.

Therefore, the rejection of claims 7, 8 and 11 under 35 U.S.C. § 103 has been overcome.

XI. Objection to Claims

The Examiner has stated that claims 9 and 10 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcoming the rejections under 35 U.S.C. § 112, second paragraph. In response, the claims have been rewritten to overcome this objection.

Therefore, the objection to claims 9 and 10 has been overcome.

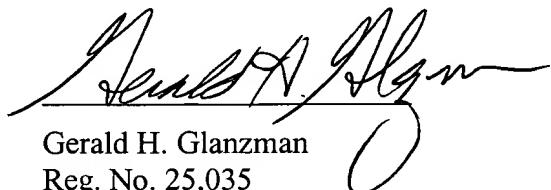
XII. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: December 10, 2004

Respectfully submitted,



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